

| Ref # | Hits | Search Query | DBs | Default Operator | Plurals | Time Stamp |
|-------|------|-----------------------------------------------------------------------------------|---------------------------------------------------------|------------------|---------|------------------|
| L2 | 280 | 602/46 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/04 14:33 |
| S1 | 478 | 606/216 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/04 12:55 |
| S2 | 732 | 606/215 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/03 13:32 |
| S3 | 425 | 606/214 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/03 14:22 |
| S4 | 1998 | 606/213 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/03 13:35 |
| S5 | 170 | tetreault.in. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/03 14:22 |
| S6 | 2 | tetreault.in. and "606"/\$.ccls. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/03 14:23 |
| S7 | 619 | dome and (bandage or dressing) | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2005/08/04 09:10 |
| S8 | 273 | dome and (bandage or dressing)and rigid | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2005/08/04 09:17 |
| S9 | 3 | ("6107536").URPN. | USPAT | OR | OFF | 2005/08/04 09:15 |
| S10 | 6 | ("4285338" "4667666" "4726364" "4870977" "4905681" "4972829").PN. | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 09:16 |

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|-----|------|----------------------------------------------------------|---------------------------------------------------------|----|-----|------------------|
| S11 | 1098 | 602/41 or 602/42 | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 10:19 |
| S12 | 122 | dome and (bandage or dressing)and rigid and transparent | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2005/08/04 09:18 |
| S13 | 505 | d24/189 | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 10:26 |
| S14 | 576 | 128/888 or 128/889 | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 10:39 |
| S15 | 359 | 602/43 | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 10:42 |
| S16 | 550 | 602/54 or 602/55 | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 10:46 |
| S17 | 471 | 602/55 or 602/57 | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 11:51 |
| S18 | 620 | 602/58 or 602/59 | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 12:12 |
| S19 | 5 | ((("5397628") or ("3732578")).PN. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/04 12:05 |
| S20 | 6 | friction near3 low and (128/893 or 128/894) and adhesive | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2005/08/04 12:36 |
| S21 | 179 | 602/56 | US-PGPUB; USPAT; USOCR | OR | OFF | 2005/08/04 12:12 |
| S22 | 2 | ("2943623").PN. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/04 12:36 |
| S23 | 807 | (428/71).CCLS. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/04 13:03 |

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|-----|-----|----------------------------|---------------------------------------------------------|----|-----|------------------|
| S24 | 0 | (623/33or623/36).CCLS. | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/04 13:04 |
| S25 | 377 | 623/33 or 623/36 or 623/37 | US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB | OR | OFF | 2005/08/04 14:33 |

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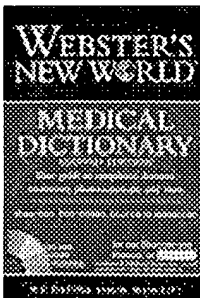
Definition of Tetrafluoroethylene

Tetrafluoroethylene: A substance that is a possible carcinogen (cancer-causing agent) used in the production of polymers such as polytetrafluoroethylene.

The US government in 2000 classified tetrafluoroethylene as "reasonably anticipated to be a human carcinogen." In laboratory animal studies of tetrafluoroethylene, cancer was observed in multiple organs of multiple species following long-term inhalation exposures.

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Coefficients of Friction for Teflon

The Physics Factbook
 Edited by Glenn Elert -- Written by his students
 An educational, fair use website

| Bibliographic Entry | Result (w/surrounding text) | Standard Result | | | | | | | | | | | | | | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|----------------|----------------|------------------|----------------|--------------------------------|------------------|------------|-------------------------|-------------|---------|---------------|---------------|-----|---------------|----------|---------------|--------------|---|---------|-----------|
| Walker, James S. <i>Physics</i> . 2nd ed. New Jersey: Pearson Education, 2004: Page 139. | <table><tr><td><u>Materials</u></td><td><u>Kinetic</u></td><td><u>Static</u></td></tr><tr><td>Teflon on Teflon</td><td>0.04</td><td>0.04</td></tr></table> | <u>Materials</u> | <u>Kinetic</u> | <u>Static</u> | Teflon on Teflon | 0.04 | 0.04 | 0.04 | | | | | | | | | | | | | | |
| <u>Materials</u> | <u>Kinetic</u> | <u>Static</u> | | | | | | | | | | | | | | | | | | | | |
| Teflon on Teflon | 0.04 | 0.04 | | | | | | | | | | | | | | | | | | | | |
| <i>Reference Tables for Physical Setting/Physics</i> . State Education Department of New York, 2002 Edition. | <table><tr><td colspan="3"><u>Approximate Coefficients of Friction</u></td></tr><tr><td></td><td><u>Kinetic</u></td><td><u>Static</u></td></tr><tr><td>Teflon on Teflon</td><td>0.04</td><td></td></tr></table> | <u>Approximate Coefficients of Friction</u> | | | | <u>Kinetic</u> | <u>Static</u> | Teflon on Teflon | 0.04 | | 0.04 | | | | | | | | | | | |
| <u>Approximate Coefficients of Friction</u> | | | | | | | | | | | | | | | | | | | | | | |
| | <u>Kinetic</u> | <u>Static</u> | | | | | | | | | | | | | | | | | | | | |
| Teflon on Teflon | 0.04 | | | | | | | | | | | | | | | | | | | | | |
| <u>Teflon Fluorocarbon Resin</u> . Omega Engineering, 2000. | <table><tr><td></td><td><u>Teflon</u></td><td><u>Teflon</u></td><td><u>Teflon</u></td></tr><tr><td></td><td><u>PTFE</u></td><td><u>FEP</u></td><td><u>PFA</u></td></tr><tr><td>Coefficient of Friction</td><td>0.1</td><td>0.2</td><td>0.2</td></tr><tr><td>Dynamic</td><td></td><td></td><td></td></tr></table> | | <u>Teflon</u> | <u>Teflon</u> | <u>Teflon</u> | | <u>PTFE</u> | <u>FEP</u> | <u>PFA</u> | Coefficient of Friction | 0.1 | 0.2 | 0.2 | Dynamic | | | | 0.1 - 0.2 | | | | |
| | <u>Teflon</u> | <u>Teflon</u> | <u>Teflon</u> | | | | | | | | | | | | | | | | | | | |
| | <u>PTFE</u> | <u>FEP</u> | <u>PFA</u> | | | | | | | | | | | | | | | | | | | |
| Coefficient of Friction | 0.1 | 0.2 | 0.2 | | | | | | | | | | | | | | | | | | | |
| Dynamic | | | | | | | | | | | | | | | | | | | | | | |
| Sears and Zemansky. <i>College Physics</i> . 3rd ed. Massachusetts: Addison- Wesley, 1960: 31. | <table><tr><td><u>Materials</u></td><td><u>Static</u></td><td><u>Kinetic</u></td></tr><tr><td>Teflon on teflon</td><td>0.04</td><td>0.04</td></tr></table> | <u>Materials</u> | <u>Static</u> | <u>Kinetic</u> | Teflon on teflon | 0.04 | 0.04 | 0.04 | | | | | | | | | | | | | | |
| <u>Materials</u> | <u>Static</u> | <u>Kinetic</u> | | | | | | | | | | | | | | | | | | | | |
| Teflon on teflon | 0.04 | 0.04 | | | | | | | | | | | | | | | | | | | | |
| <u>Teflon Industrial Coatings - Typical Properties</u> . DuPont. 2003. | <table><tr><td><u>Property</u></td><td><u>Teflon</u></td><td><u>Teflon</u></td><td><u>Teflon</u></td><td><u>Teflon</u></td></tr><tr><td><u>Coefficient of Friction</u></td><td><u>PTFE</u></td><td><u>FEP</u></td><td><u>PFA</u></td><td><u>ETFE</u></td></tr><tr><td>-static</td><td>0.12- 0.15</td><td>0.12- 0.20</td><td>0.2</td><td>0.24- 0.50</td></tr><tr><td>-dynamic</td><td>0.05- 0.10</td><td>0.08- 0.3</td><td>-</td><td>0.3-0.4</td></tr></table> | <u>Property</u> | <u>Teflon</u> | <u>Teflon</u> | <u>Teflon</u> | <u>Teflon</u> | <u>Coefficient of Friction</u> | <u>PTFE</u> | <u>FEP</u> | <u>PFA</u> | <u>ETFE</u> | -static | 0.12- 0.15 | 0.12- 0.20 | 0.2 | 0.24- 0.50 | -dynamic | 0.05- 0.10 | 0.08- 0.3 | - | 0.3-0.4 | 0.05 - 0. |
| <u>Property</u> | <u>Teflon</u> | <u>Teflon</u> | <u>Teflon</u> | <u>Teflon</u> | | | | | | | | | | | | | | | | | | |
| <u>Coefficient of Friction</u> | <u>PTFE</u> | <u>FEP</u> | <u>PFA</u> | <u>ETFE</u> | | | | | | | | | | | | | | | | | | |
| -static | 0.12- 0.15 | 0.12- 0.20 | 0.2 | 0.24- 0.50 | | | | | | | | | | | | | | | | | | |
| -dynamic | 0.05- 0.10 | 0.08- 0.3 | - | 0.3-0.4 | | | | | | | | | | | | | | | | | | |

Teflon is the trademark name DuPont uses for the compound polytetrafluoroethylene (PTFE) and three similar compounds: perfluoroalkoxy polymer resin (PFA), fluorinated ethylene propylene copolymer (FEP), and the copolymer of ethylene and tetrafluoroethylene (ETFE). The American chemist Roy J. Plunkett (1910-1994) discovered Teflon (PTFE) in 1938. Teflon was invented for machine parts. Several years later a Frenchman used it to coat a frying pan. Today Teflon is often used in cookware like pans; the reason for this lies in its properties. It was first shown to the public as a commercial product in 1946.

The force of friction is calculated by the formula...

$$F_f(\text{force of friction}) = \mu (\text{"mu" or coefficient of friction}) * F_n (\text{normal force})$$

Both F_f and F_n are measured with the unit N (Newton). In order for F_f and F_n to have the correct unit N in the formula, μ therefore must be unitless.

Teflon is the type of plastic that has the lowest coefficient of friction meaning this synthetic material has a slippery feel to it; this is the reason why it is used to make non-stick pans. Both the coefficient of kinetic friction and the coefficient of static friction for this material are low. The most common value found for the coefficient of kinetic friction (μ_k) and

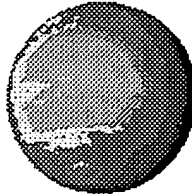
coefficient of static friction (μ_s) for Teflon is 0.04.

Teflon also has other interesting properties. It is inert meaning that it doesn't react to many chemicals. This property allows it to be used as containers and pipelines for reactive chemicals. Its melting point is 600 K.

Garvin Tam -- 2004

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